

## ABSTRACT OF THE DISCLOSURE

A method and apparatus are described for converting a number from a floating point format to an integer format or from an integer format to a floating point format responsive to a control signal of a control signal format.

5       Numbers are stored in the floating point format in a register of a first set of architectural registers in a packed format. One or more numbers in the floating point format are converted to the integer format and placed in a register of a second set of architectural registers in a packed format. Conversion from integer format to floating point format is performed in a similar manner.

10       A floating point arithmetic apparatus is described that provides for converting a plurality of numbers between integer formats and a floating point formats, further providing for conversion operations that require a greater data path width than floating-point arithmetic operations.